Qwest's Standard

Multi Tenant Environment (MTE)

Terminal Access

Protocol

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Introduction

Qwest provides CLECs, possessing a valid interconnection agreement, direct access to its multi-tenant environment (MTE) terminals. Direct access to Qwest MTE terminals is provided for the purpose of accessing inside wire owned by Qwest (hereinafter "Intrabuilding Cable"). CLECs may directly access a MTE terminal to obtain access to a subloop unbundled network element (e.g., Intrabuilding Cable) from Qwest or directly access a NID to obtain access to customer owned inside wire.

This document provides the appropriate access methodology or protocol for CLEC access to Qwest owned or controlled MTE terminals that are attached either to the outside of an MTE or inside of a MTE premises. It is intended for use by CLEC field technicians provisioning telecommunications services to its end user customers.

The MTE access protocol is presented by first providing the assumptions and precondition requirements that establish the correct parameters to allow CLEC direct MTE access. It also addresses the conditions in the form of correct behavior to be exercised when accessing a Qwest owned MTE terminal. Then the access protocol is described in the context of where the network demarcation point occurs as well as the MTE termination arrangements found in Qwest's network. This document is intended to illustrate access in many of the large number of MTE terminals placed in Qwest's networks over several decades. While not inclusive of the entire MTE terminal universe, the access protocol provides clear direction for direct CLEC access of the vast majority of such terminals.

Qwest

Assumptions for direct CLEC Access of Qwest MTE Terminals:

1. There are many types of outside plant (OSP) terminals currently deployed in Qwest's network. This MTE Access Protocol provides CLECs with the methodology to directly access building terminals mounted inside buildings and those attached to the outside of buildings (i.e., Inside Terminals, Wall Feed Terminals).

2. The volume and variety of OSP terminals complicates the capability for any MTE terminal access protocol to address every scenario encountered in Qwest's network. Therefore, proper access methodology to Qwest MTE terminals not identified in the MTE access protocol will be provided on an individual case basis (ICB). Prior to providing proper access methodology, such assessment shall not prevent CLEC from directly accessing Intra-Building Cable Loop utilizing common industry temporizing methods.

3. CLEC will perform appropriate procedures to ensure subloop access to the correct subloop customer. These procedures may include adding tone to the subloop to verify access to the correct end user customer.

4. Qwest and CLECs will always adhere to National Electric Code (NEC) and National Electric Safety Code (NESC) requirements.

5. Access to Qwest subloop UNEs provides CLEC with access to an Intra-Building Cable Loop which is a Qwest provided facility from the building terminal inside a MTE, commonly the MPOE, to the demarcation point at the end user customer premises inside the same building. This subloop UNE only applies when Qwest owns the intra-building cable (i.e., riser cable, inside wire).

6. Access to MTE terminals that perform a demarcation point between Qwest's distribution network and end user customer or landlord owned intra-building cable shall be negotiated between CLEC and the end user customer or landlord. Qwest has no ownership or control of such inside wire or riser cable.

Preconditions for CLEC Access to Qwest MTE Terminals:

1. CLEC has an in effect interconnection agreement in the state where the MTE is located.

2. The appropriate *Qwest Cable Wire Service Termination Policy* (CWSTP) option, as defined by tariff, has been identified for the MTE for which the CLEC desires direct access.

3. Qwest has received a valid local service request (LSR) for subloop access.

4. CLEC termination inventory is contained in appropriate Qwest provisioning and repair systems. CLEC termination inventory creation may occur during, or in conjunction with, the first subloop Intra-Building Cable Loop UNE order in a given MTE terminal.

Conditions for CLEC Access of Qwest Owned MTE Terminals:

1. Access must minimize disruption to Qwest facilities and not disrupt Qwest customer service.

2. Intra building cable (IBC) owned and controlled by Qwest is only to be used to provide telecommunications services, as contemplated in the Telecom Act of 1996, to a MTE end user customer.

3. Line protection of Qwest facilities must remain intact per National Electric Code (NEC) and National Electric Safety Code (NESC).

4. Direct MTE terminal access protocol shall provide CLEC direct access to the customer side of the MTE terminal cross-connect or direct access to the MTE terminal protector field.

5. If no customer cross-connect field exists in the MTE terminal, CLEC shall access utilizing a temporizing method that maximizes long-term accessibility to the terminal (e.g., maintains the length of Qwest's network facilities).

6. Direct MTE terminal access protocol shall provide methodology for CLEC to break direct current (DC) continuity with Qwest's network.

7. Terminal technology and/or subloop volume may necessitate placement or re-placement of a cross-connect field to serve as a single point of interconnection (SPOI).

8. CLEC may access Qwest MTE terminal as a test access point for subloop Intra-Building Cable Loop UNEs leased from Qwest.

CLEC Responsibilities:

A local service request (LSR) must be issued by CLEC to Qwest in all cases before access to a Qwest owned terminal. This will allow Qwest to:

- Remove cross-connects, or connectivity, from records.
- Review terminal for the Cable Wire Service Termination Policy (CWSTP) option.
- Review type of terminal for direct access capability.

When attaching conduit to closures:

- Use existing knockouts in closures.
- If not equipped with knockouts, use standard size hole punch to make an opening.
- Locate opening to not hinder door or other operating parts or cable/jumper paths.
- Conduit entry into MTE terminal must not allow water to drip into closure.

Attaching jumper to Intra Building Cable (IBC):

- Identify IBC from MTE terminal customer side.
- If a cross-connect field exists at MTE terminal, take appropriate action to remove continuity from Qwest network, if any, and attach CLEC jumper (e.g., “lift and lay”).
- If no cross-connect field exists, access IBC by placing a temporary connection.

Housekeeping:

- Maintain a safe and clean work environment at the MTE terminal.
- Remove left-in jumpers completely from terminations (i.e., no dangling ends).
- Dress jumpers in proper raceways or paths.
- Close and secure closure properly.
- Remove any trash resulting from work operation.

Direct MTE Terminal Access Determined by CWSTP Option:

CWSTP Option 1

MTE Terminals identified as Option 1 are MTE network interface devices (NIDs). A MTE NID is defined as a terminal that is simultaneously the minimum point of entry (MPOE) and the network demarcation point where Qwest of telecommunication facilities ownership and control ends and the property owner's ownership and control begins. MTE NID access may be obtained at the protector field, where spare capacity exists, as well as at the customer's inside wire appearance (i.e., customer cross-connect side of the MTE NID). Once inside wire ownership is determined to be that of the end user customer or landlord (i.e., MTE NID), CLEC shall have access to the inside wire without precondition and interference from Qwest.

Qwest provides access into a protector field at MTE NIDs on an individual case basis (ICB) dependent upon the type of protector field present at the MTE terminal, the type of splice stub available to connect to the protector field, and availability of spare unused protectors (i.e., no distribution facilities connected to the protector). The CLEC will be allowed to splice into the protector field, at the splice point on the OSP side of the protector, when spare protector capacity exists. Per pair access will be granted at the protector stub splice, except where modular splice connections exist, and only be allowed in cable size increments appropriate to the spare capacity available in the terminal. In such case, for example, if the splice chamber allows splice strips (i.e., modular connectors) for 25 pair cable increments, CLEC access will be granted in 25 pair increments as spare capacity exists. All cable pairs brought into a MTE NID protection field via splice chamber must be terminated per section 315 of the NESC and section 800.30 of the NEC. If CLEC capacity requirements exceed terminal capacity, Qwest will provide more capacity where it is technically feasible (e.g., space, power, building owner's cooperation) at CLEC request and expense. CLEC may directly access customer owned inside wire without limitation from Qwest. Management of DC continuity with Qwest's network is the responsibility of the CLEC. CLEC is not authorized to manipulate Qwest's terminations or line protectors within the MTE NID.

CWSTP Option 2

Option 2 sets the demarcation point at the floor level in a multi story building. In Option 2, Qwest owns and maintains riser cable from the floor level back to the MPOE terminal. The same architecture also applies to trailer parks and marinas. Option 2 typically provides a readily accessible cross connect field for direct MTE terminal access at the MPOE. Qwest typically inventories Qwest owned inside wire (riser cable) extending beyond the MTE terminal to the network demarcation point. Option 2 MTE terminal access may be obtained at the MPOE

protector field, MPOE terminal, and at the network demarcation point (e.g., located on each floor of a multi-story building or dock of a marina).

- Qwest provides access into a protector field at Option 2 MTE terminals on an individual case basis (ICB) dependent upon the type of protector field present at the MTE terminal, the type of splice stub available to connect to the protector field, and availability of spare unused protectors (i.e., no distribution facilities connected to the protector). The CLEC will be allowed to splice into the protector field, at the splice point on the outside plant side of the protector, when spare protector capacity exists. Per pair access will be granted at the protector stub splice, except where modular splice connections exist, and only be allowed in cable size increments appropriate to the spare capacity available in the terminal. In such case, for example, if the splice chamber allows splice strips (i.e., modular connectors) for 25 pair cable increments, CLEC access will be granted in 25 pair increments as spare capacity exists. All cable pairs brought into a protection field via splice chamber must be terminated per section 315 of the NESC and section 800.30 of the NEC. If CLEC capacity requirements exceed line protector capacity, Qwest will provide more capacity where it is technically feasible (e.g., space, power, building owner's cooperation) at CLEC request and expense.

- CLEC access to customer cross-connects is accomplished in substantially the same manner as Qwest provides for itself. For MPOE terminal access, CLEC places jumper wire between the CLEC controlled cross-connect to the end user customer side of the Qwest owned MTE terminal. If MTE access is gained at the network demarcation point, the CLEC has free access to terminations cabled to the suite or apartment units.

CWSTP Option 3

For Option 3, the demarcation point is located either in the suite or apartment unit. Qwest owns and maintains all wire and equipment from the suite or unit back to the central office. Option 3 MTE terminals typically consist of terminals at the MPOE that are hard-wired and contain no readily accessible cross-connect field. The exception to this rule is large MTE buildings. Prior to direct CLEC access, Qwest owned and controlled inside wire for Option 3 MTE terminals was not always inventoried in provisioning and maintenance databases. Hard-wired terminals perform the function of a splice rather than a cross-connect as Qwest technicians have little cause to access such terminals. However, the need for over-voltage protection in the MPOE terminal resulted in the placement of a terminal without cross-connects. Option 3 MTE terminal access may be obtained at the MPOE protector field as well as at the network demarcation point between Qwest's owned and controlled inside wire and the first point of entry into the end user customer suite or apartment. Direct CLEC access to Option 3 hard-wired terminals will initially require a temporized connection. If conditions warrant, Qwest will replace the Option 3 hard wired terminal with a terminal containing a proper cross-connect field and clear demarcation points for test access.

- Qwest provides access into a protector field at MTE terminals on an individual case basis (ICB) dependent upon the type of protector field present at the MTE terminal, the type of splice stub available to connect to the protector field, and availability of spare unused protectors (i.e., no distribution facilities connected to the protector). The CLEC will be allowed to splice into the protector field, at the splice point on the outside plant side of the protector, when spare protector capacity exists. Per pair access will be granted at the protector stub splice, except where modular splice connections exist, and only be allowed in cable increments appropriate to the spare capacity available in the terminal. In such cases, for example, if the splice chamber allows splice strips (i.e., modular connectors) for 25 pair cable increments, CLEC access will be granted in 25 pair increments as spare capacity exists. All cable pairs brought into an MTE NID protection field via splice chamber must be terminated per section 315 of the NESC and section 800.30 of the NEC.

- CLEC access to customer cross-connects are accomplished by first determining the terminal block type (e.g., 66 and 76 type terminal blocks) and following the access procedures outlined below for Option 3.

- If CLEC capacity requirements exceed line protector capacity, Qwest will provide more capacity where it is technically feasible (e.g., space, power, building owner's cooperation) at CLEC request and expense.

CWSTP Option 4

Option 4 provides a MPOE for campus environments. Such terminals may be attached to the MTE but typically are placed near the property line of a campus environment and are detached from MTE buildings usually resting on a separate pad on provided rights of way. Access to attached Option 4 terminals functioning as Option 1 NIDs will be provided as described above in Option 1. Access to Option 4 detached terminals is provided through Field Connection Point (FCP) and collocation processes (see SGAT for terms and conditions).

66 Type Terminal Blocks

If the 66 type terminal block is a M150 or M125 type, CLEC may directly access the MTE terminal on the customer side of the cross-connect field by performing a "lift and lay" process whereby the Qwest jumper wire is removed and the CLEC jumper wire is placed. If a bridge clip acts as a jumper wire, the CLEC must remove the bridge clip or wire jumper and lay jumper wire on the customer side of the cross connect field. Removal of a bridge clip or wire jumper removes DC continuity with Qwest's network *(Fig 1)*.

When found in Option 3, often the 66 terminal block is a single terminating strip. In this scenario, the CLEC must determine the type of line protector provided in the MTE terminal.

- If the protector is a carbon (screw) or fuse type protector, a M150 or M125 type 66 block the existing 66 block must be replaced. Protectors of this type do not provide a mechanism to remove DC continuity that may lead to excessive bridge tap in direct MTE terminal access applications. Qwest will perform the terminal block replacement *(Photo 1)*.

- If the protector is a five-pin line protector, CLEC may directly access the terminal by placing a capacity expanding device (Marconi part # SA3) over the existing customer cross-connect and then laying the CLEC jumper wire onto the capacity expanding device. To break DC continuity, the CLEC must remove the five-pin line protector for the end user customer and replace it with a service denial line protector unit (Marconi part # F013789).

Additionally, CLEC must perform the following activities:

1. Tag the CLEC jumper wire with CLEC name and unit number accessed.

2. Properly dress jumper wire in wire guides provided within terminal or on backboard.

3. Provide raceway or conduit appropriate to the environment (i.e., inside versus outside) between the CLEC terminal & the customer side of the Qwest provided terminal.

4. Utilize knockouts, where they exist and are accessible, for conduit placement in attached outside and closed terminals. If no knockouts exist in the MTE terminal for conduit placement, drill hole in such a manner to minimize introduction of moisture into the terminal.

76 Type Terminal Block:

When accessing 76 type terminal blocks *(Photo 8)* in MTE terminals, CLEC may directly access the customer side of the cross-connect field by performing a "lift and lay" procedure. 76 type terminals utilize a screw type binding post connecting the Qwest's distribution network between the central office and the network demarcation point near the end user. Access to 76 type MTE terminals involves the CLEC unscrewing the customer cross connect binding post, removing Qwest's jumper wire, placing CLEC jumper on the customer cross-connect, and tightening the screw on the binding post. Additionally, CLEC must perform the following activities:

1. Tag the CLEC jumper wire with CLEC name and premises unit number accessed.

2. Properly dress jumper wire in wire guides provided within terminal or on backboard.

3. Provide raceway or conduit appropriate to the environment (i.e., inside versus outside) between the CLEC terminal & the customer side of the Qwest provided terminal.

4. Utilize knockouts, where they exist and are accessible, for conduit placement in attached outside and closed terminals. If no knockouts exist in the MTE terminal for conduit placement, drill hole in such a manner to minimize introduction of moisture into the terminal.

Removal of the Qwest jumper wire at the customer cross-connect breaks DC continuity with Qwest's network.

Weather protection must be considered when accessing OSP closures. Typically, wall feeds are located in weatherproof closures mounted on the side of buildings. The closure houses a splice chamber, protector field, and termination block(s). Terminations are grounded per NESC and NEC regulations *(Photos 6 and 7)*.

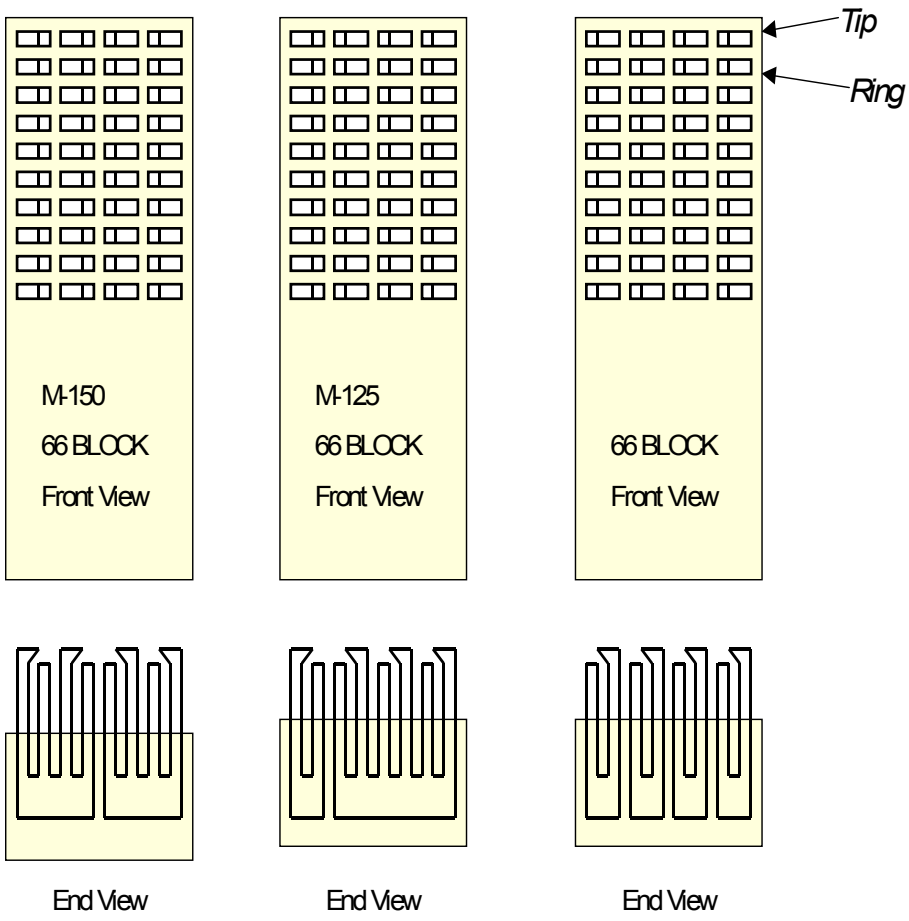
To access an OSP closure, the CLEC will place a conduit with a weatherproof connection from CLEC closure to the Qwest closure. This conduit must not obstruct any openings or access panels so as to block entry into the cabinet. The conduit will utilize existing knockouts for entrance into the closure where possible or will place CLEC facilities through the bottom skirting of the closure. CLEC closure must be protected and independently grounded per NESC and NEC standards before connecting conduit to the Qwest closure.

Single Point of Interconnection (SPOI)

For CWSTP options 1, 2, and 3, Qwest may place a Single Point of Interconnection (SPOI) at or near the MTE terminal as space, terminal technology, or terminal access volumes dictate. On an ICB, Qwest will provision a new cross-connect field as a SPOI where technically feasible (space, power, building owner's cooperation). CLEC shall have access to existing MTE terminal prior to placement of SPOI utilizing temporary connections at such terminal.

If a SPOI is placed after direct CLEC access has been granted at a MTE terminal, Qwest will negotiate with CLEC timing to minimize end user customer service disruption to move all existing terminations to the SPOI and subsequent MTE terminal access will be granted to CLEC at the SPOI only.

Family of 66 type blocks



ADDITIONAL ACCESS METHODS

CLEC may access subloop UNEs at any accessible terminal, including the NID, MPOE, or demarcation point. If the terminal is equipped with a cross-connect field, the CLEC may access the subloop UNE at the customer side of the cross-connect. If a cross-connect field does not exist, CLEC may use a temporary connection to obtain access to the customer side of the MTE terminal until Qwest can provide a proper cross-connect field or SPOI. Where Qwest places a SPOI to create a permanent cross-connect field for CLEC direct access, Qwest will move all temporary CLEC connections onto the SPOI. CLEC may not temporize its connections once Qwest places a SPOI. CLEC may request Qwest place a SPOI at CLEC expense.

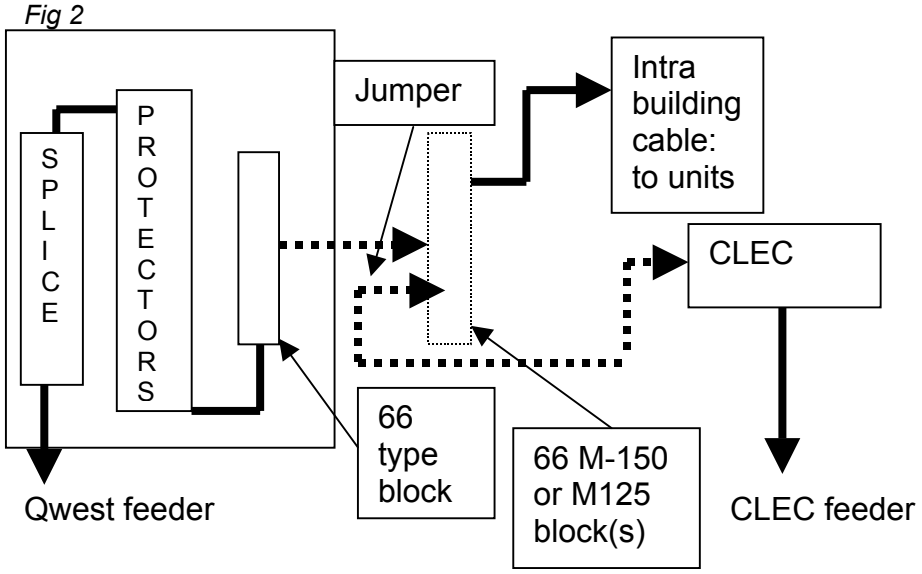
Typically, feeder cable and intra building cable are terminated on separate 66 blocks. Cross-connect jumpers are run between the 66 blocks to connect the feeder cable to the intra building cable.

Either 66-M150 or 66-M125 blocks can be used as a cross-connect field supporting multiple vendors. Cable connected back to the Qwest central office is terminated on the left side of the M-150 or M-125 block. Intra building cable (IBC) is connected on the far right side of the blocks. Continuity from the feeder side to the intra building cable side is achieved by:

A) Placing a bridging clip across the correct center to end termination tips.
B) Laying a jumper wire down on the correct center to end termination tips.

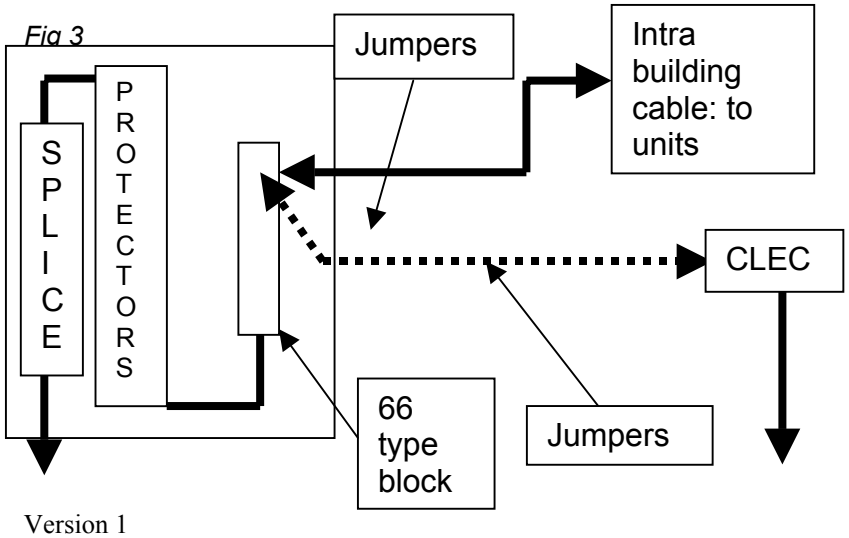
Typically Inside Terminals consisting of 300 pairs and less are equipped with extra 66 blocks on the backboard. CLECs gain access to IBC by placing a jumper at the 66-M150 or M-125 block(s). Continuity to Qwest's network is eliminated by removing a jumper or bridging clip at the 66-M150 or M125 block.

Fig 2



Inside terminal without M150 or M125 66

Fig 3

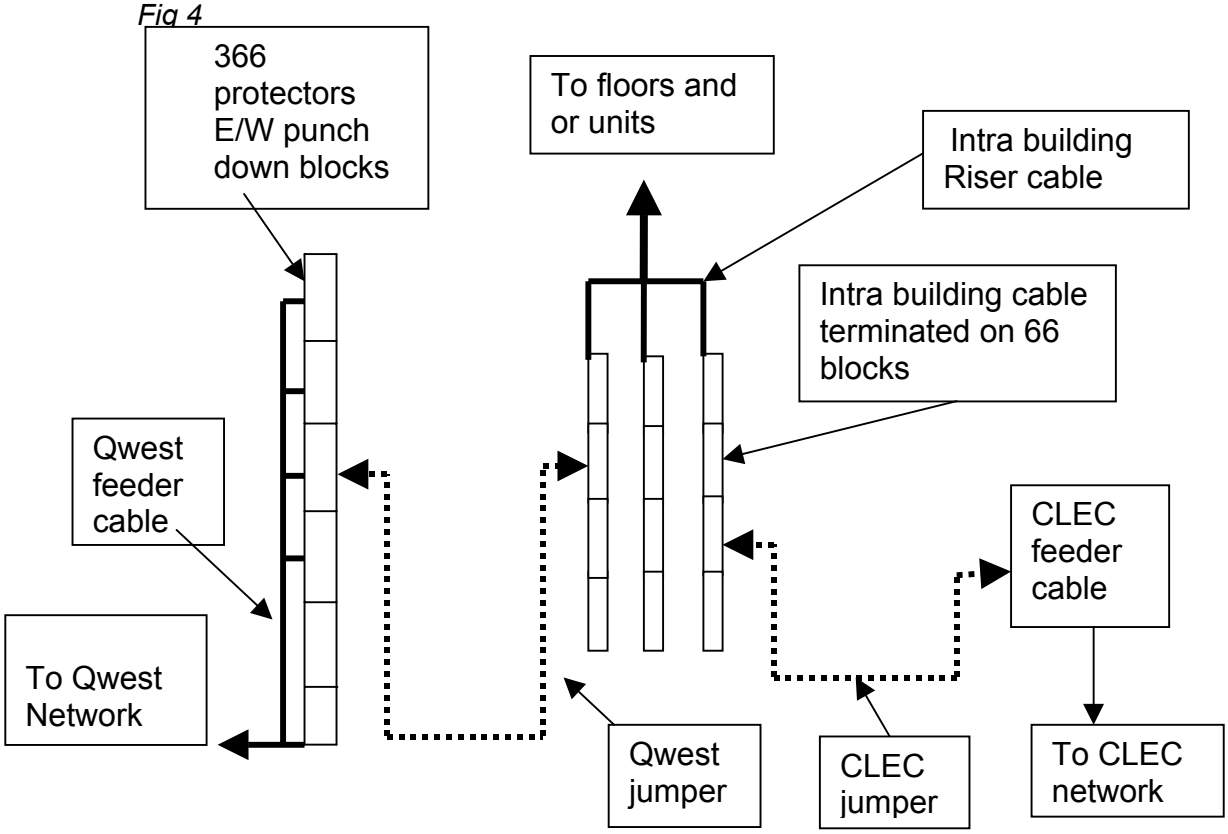


Qwest feeder CLEC feeder

Access is obtained by placing a capacity expanding device (Seimon part # SA3) over the existing customer cross connect and then lay the CLEC jumper wire onto the capacity expanding device. To break DC continuity, CLECs must remove the 5 pin line protector for the customer and replace it with a 3 pin service denial line protector unit (Marconi part # F013789) and leave the 5 pin protector in the closure.

Typical MTE with more than 300 cable pairs

Fig 4

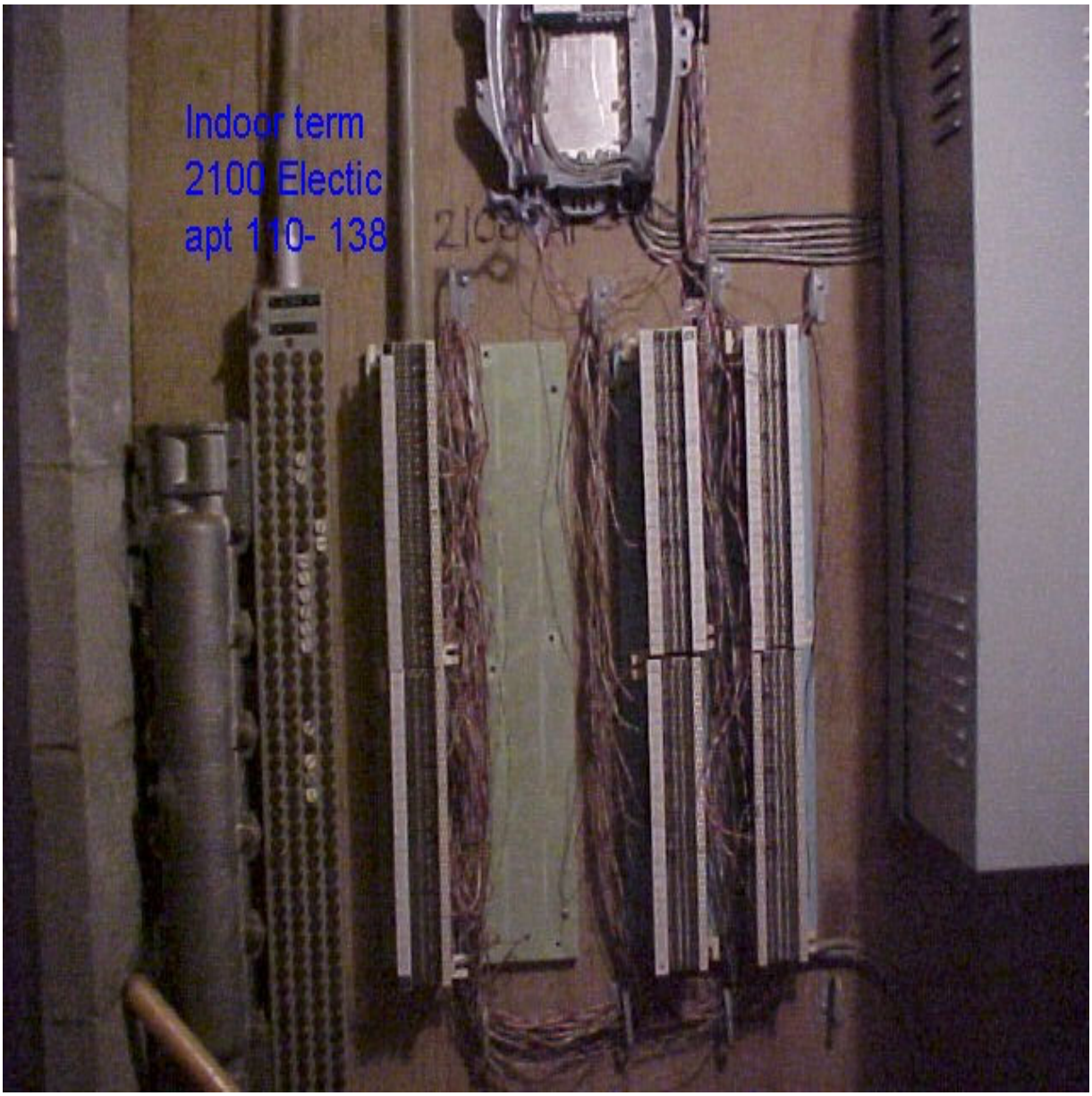


CWSTP Option 1: CLEC gains access to IBC through building owner or authorized party.

CWSTP Option 2: CLEC may access IBC subloops at the minimum point of entrance for a recurring charge. If a floor level terminal DMARC is an option, the access to the House Cable will be determined by the CLEC and the building owner or their agent.

Inside Terminal equipped with (E/W) carbon screw down protectors. Qwest cable comes in from below and is spliced to a protector field, which is terminated at the 66 blocks on the left. The IBC cable is terminated on the 66 blocks to the right. Because the IBC has separate accessible terminations a cross-connect field exist After determining the CWSTP option and issuing a LSR the CLEC may access the IBC as outlined on page 6.

Photo 1

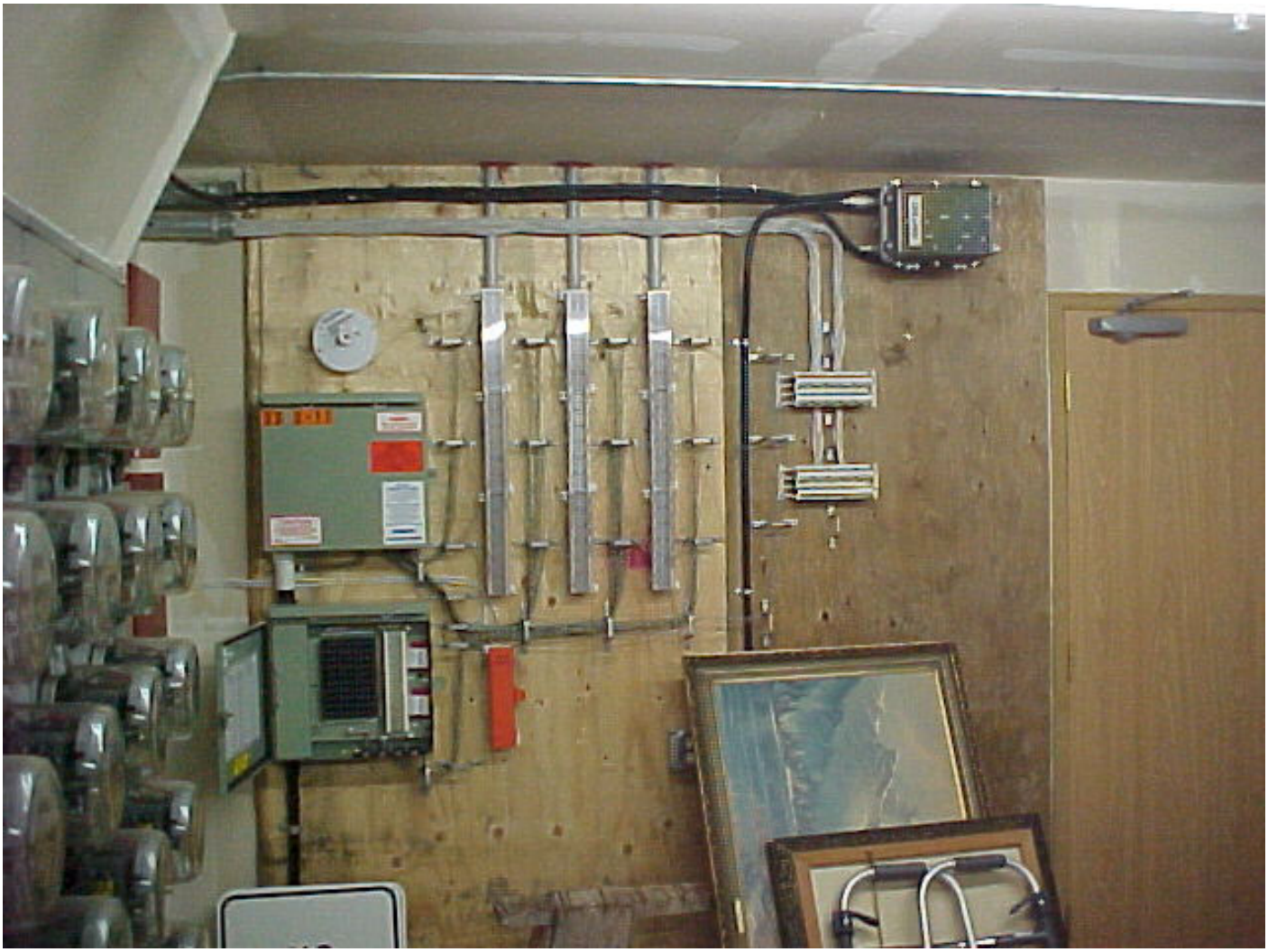


Same concept as photo 1, except splice and termination components are arranged differently.

Photo 2

Inside terminal E/W building entrance protectors (BEP). Qwest cable comes in from below to a splice chamber (left side of black protectors). The splice chamber is E/W 25 pair splicing strips that has factory connections through the protector block to the 66 type block and/or the pin type connectors (Bottom closure far left). The IBC is terminated on separate 66 type blocks fastened directly to the plywood backboard. After determining the CWSTP option and issuing a LSR the CLEC may access the IBC as outlined on page 6.

Photo 3

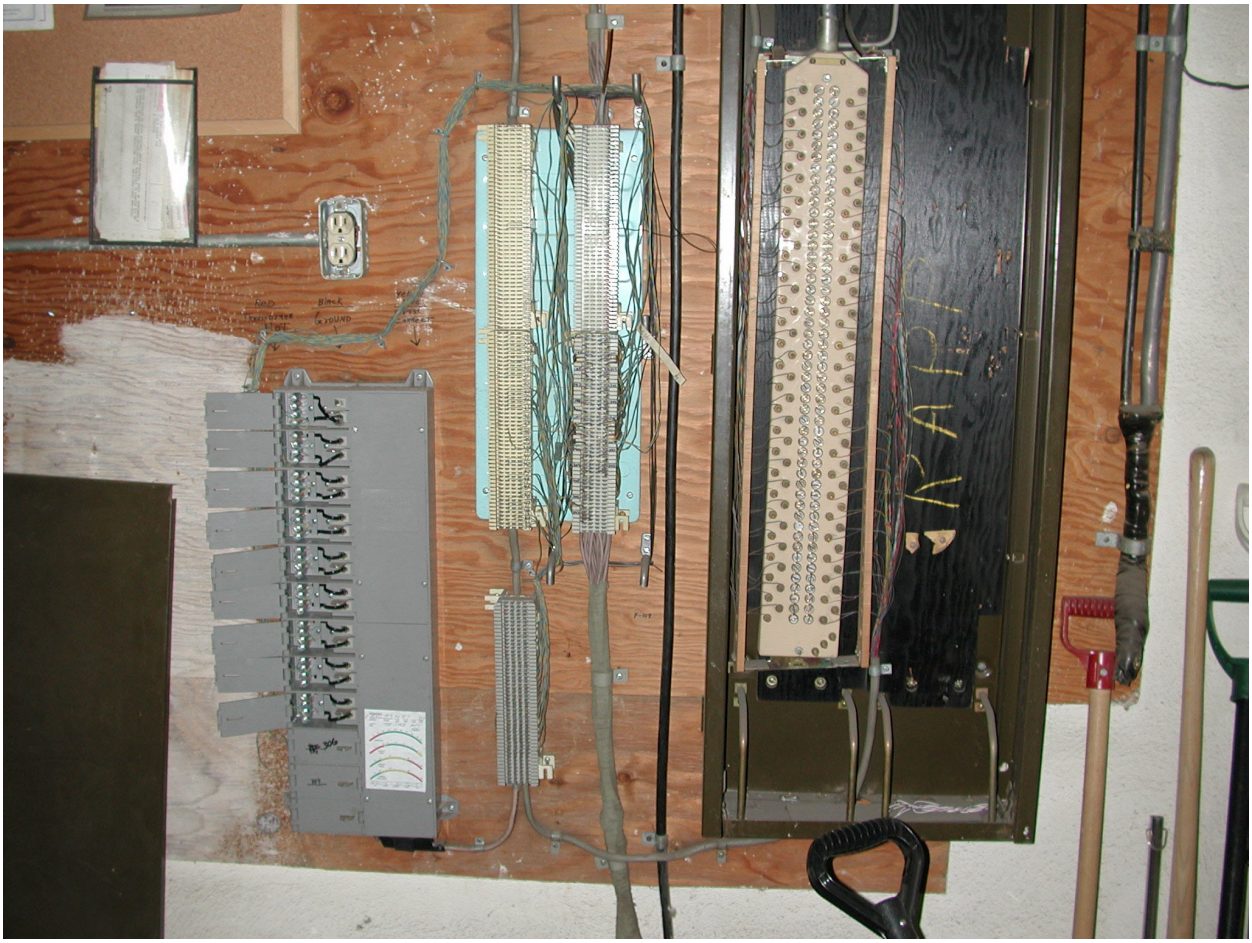


Inside terminal, the Qwest cable comes in from top far right and splices into the protector block then it is jumpered to a 66 block (bottom center) and on to the RJ11 connections on the far left. The IBC is terminated on the 66 blocks with the blue backboard then jumpered to the RJ11 connections on the gray closure to the left.

After determining the CWSTP option and issuing a LSR the CLEC may access the IBC as outlined on page 6.

The IBC in this case may be accessed at the 66 blocks on the blue backboard or the RJ11 jacks.

Photo 4

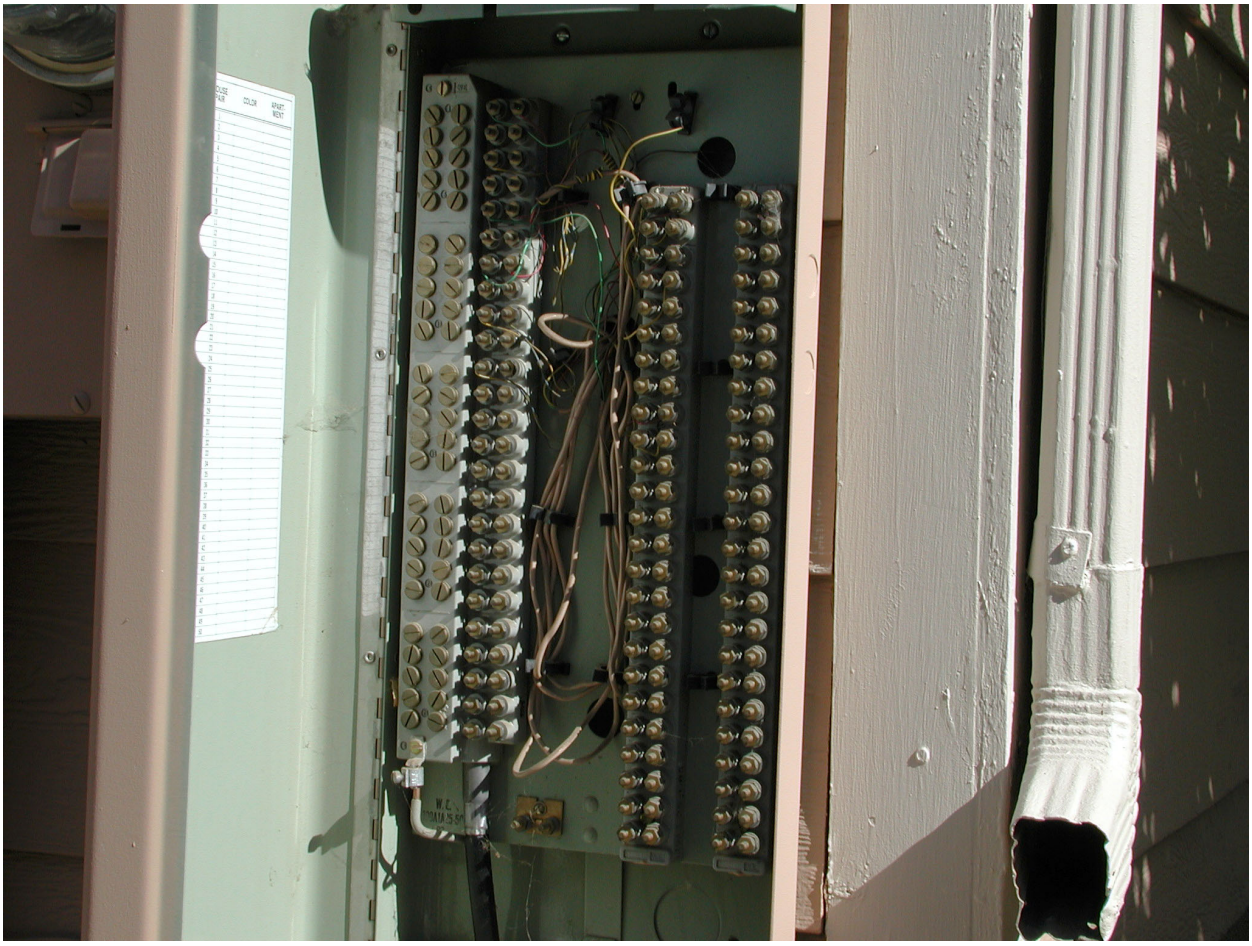


Inside terminal: Qwest cable comes in from the bottom center through the protectors to the RJ11 jacks behind the orange colored covers. The IBC is terminated at 66 blocks on the far left and jumpered to the RJ11 jacks. After determining the CWSTP option and issuing a LSR the CLEC may access the IBC as outlined on page 6.

Photo 5

Photo 6

Photo 7



Wall feed: Qwest cable is direct buried to the closure, the screw down carbon protectors are spliced to the cable in the skirt of the closure. The IBC is terminated on 76 type post on the right. After determining the CWSTP option and issuing a LSR the CLEC may access the IBC as outlined on page 6.

Wall feed: Qwest cable is direct buried to the closure, the screw down carbon protectors are spliced to the cable in the skirt of the closure. The IBC is terminated on 76 type post on the on either side of the protectors. After determining the CWSTP option and issuing a LSR the CLEC may access the IBC by placing a temporary connection directly on the IBC pair. (See page 6)

Photo 8

Wall feed: The Qwest drop is terminated at the protector and wired to the screw down type termination. Then it is wired through the RJ11 jack and then terminated on the outside screw down terminations. After determining the CWSTP option and issuing a LSR the CLEC may access the IBC as outlined on page 6.

Photo 9

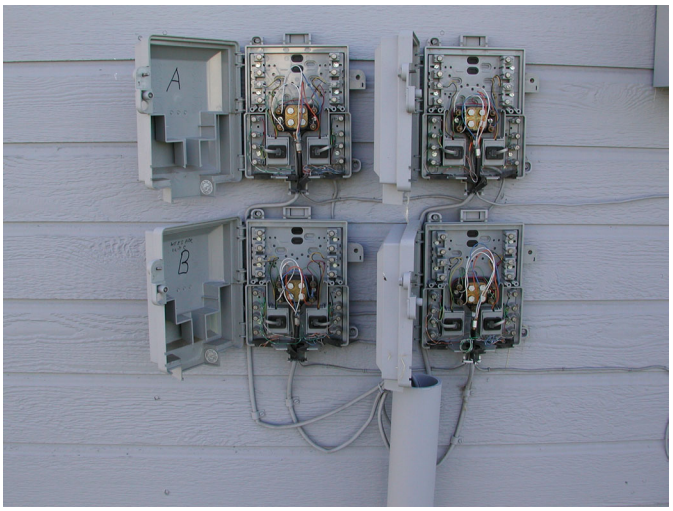
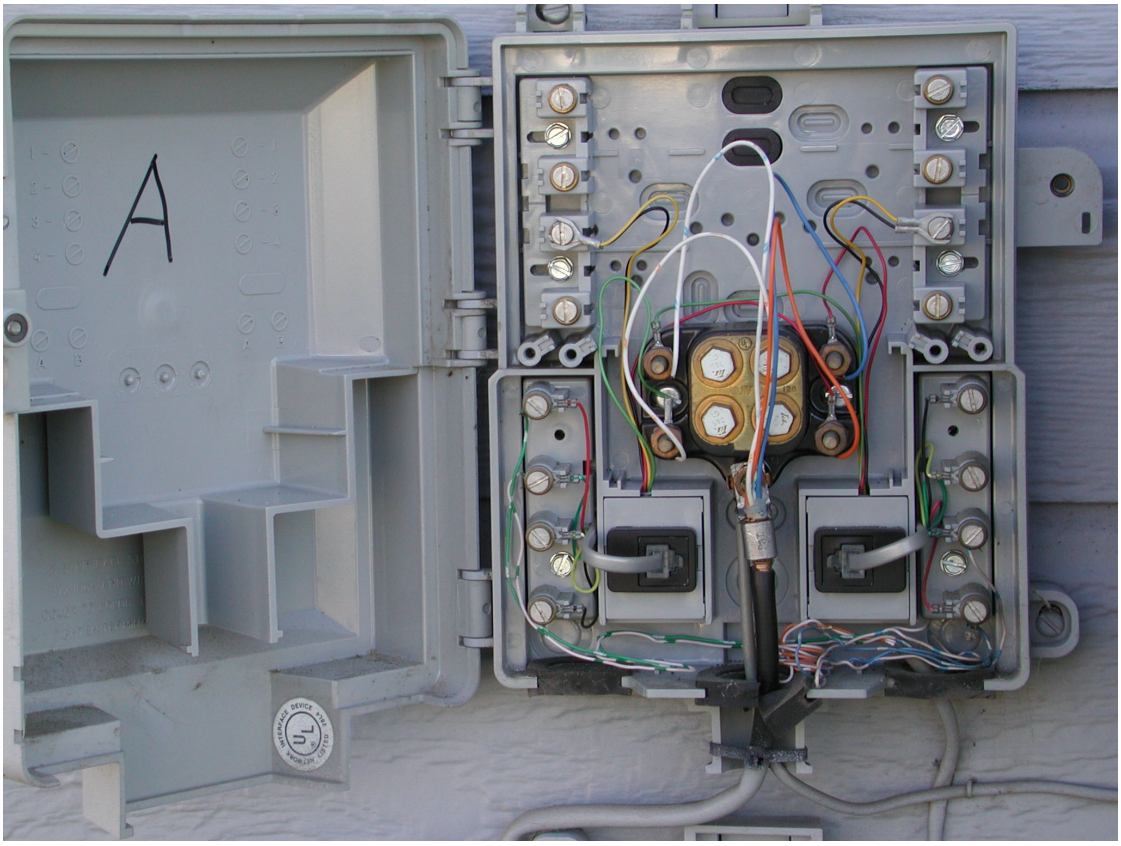


Photo 10



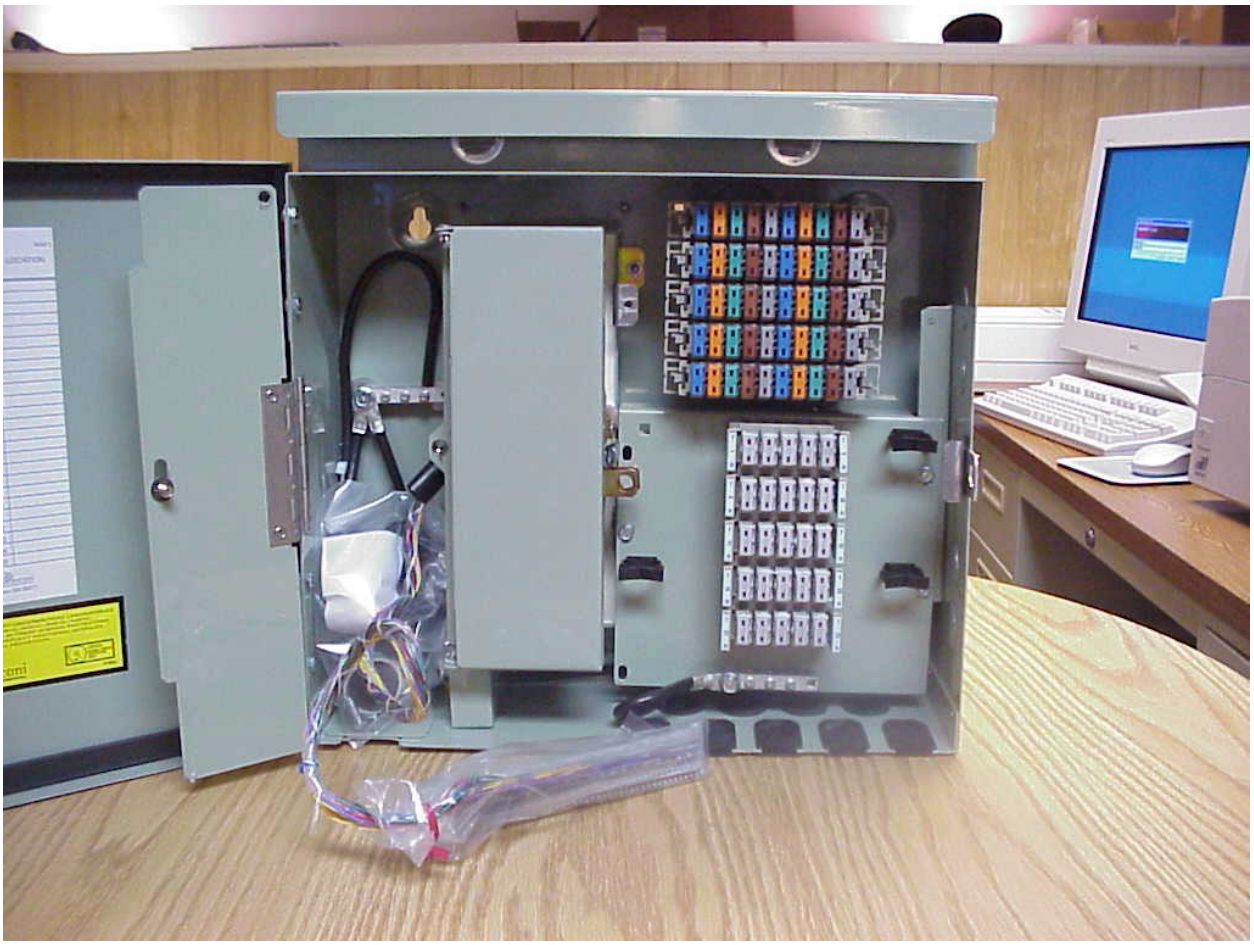
Wall feed: Qwest cable is direct buried to the closure, and spliced to the 5 pin protectors which is terminated on the 66 block. The IBC is terminated on 66 blocks located on the blue back board. After determining the CWSTP option and issuing a LSR the CLEC may access the IBC as outlined on page 6.

Photo 11

Photo 12

New prototype WF E/W a splice chamber, 5 pin protectors, feeder terminations, IBC terminations & knockouts for CLEC conduit. (Currently in a field trial in WA.)

Photo 13



Definitions

CWSTP	Cable and Wire Service Termination Policy. Qwest's tariffed offering of demarcation options available to MTE owners or landlords.
Demarcation Point	A physical point in the distribution network where Qwest ownership and control of the facility ends and MTE owner or landlord ownership and control of the facility begins.
MPOE	Minimum Point of Entry. The closest physical point to where the distribution facilities cross the property line or the closest practical point to where distribution facilities center a MTE building. Typically, MPOE consists of a building terminal containing overvoltage protection. The MPOE may also be the demarcation point.
MTE Terminal	Qwest owned building terminal that is physically attached to the inside or outside of a MTE building and the distribution facilities on both sides of the terminal are owned and controlled by Qwest.
NID	Network Interface Device. A NID is a device wired between a telephone line protector and the inside wiring. The NID consists of an overvoltage protector designed to isolate the distribution network from the inside wiring associated with the MTE.
SPOI	Single Point of Interconnection. At MTEs, a SPOI provides an accessible cross-connect field, where none exists, for CLEC and Qwest to access the customer side of the terminal.